

Colgan (g. p.)

Diseases of the Ear.

AN ESSAY

ON THE

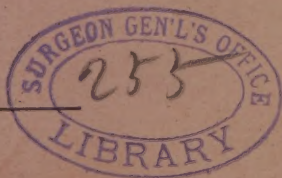
PRESENT STATE

OF

AURAL MEDICINE AND SURGERY.

BY

J. P. COLGAN, M. D.



BROOKLYN :

W. H. Hogan, Printer, Room, No. 6, Montague Hall.
1858.

AN APPEAL
TO THE
MEDICAL PROFESSION IN BROOKLYN,
IN BEHALF OF THOSE AFFLICTED WITH
D E A F N E S S
AND OTHER
DISEASES OF THE EAR:

BEING

A N E S S A Y

READ BEFORE THE "MEDICO CHIRURGICAL SOCIETY,"

August 24th, 1857,

BY JOSEPH P. COLGAN, M. D.

&c. &c. &c.



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INTRODUCTION.

MR. PRESIDENT and GENTLEMEN of "The Brooklyn Medical Society"—Your society, the only one, I believe, at present existing in our city, at least actively—although the number of medical men who dwell therein would lead a person to suppose the existence of many—was founded, if I mistake not, for the purpose of cultivating : First, and before all other objects, peace and good will amongst its members ; and, secondly, for the accumulation of medical facts and the advancement of medical science ; and, lastly, for the diffusion of the medical knowledge deduced from these accumulated facts. Its mission is a noble, responsible, and highly essential mission, for no individual experience or observation was yet ever sufficient to perfect the physician. There must be a place to deposit FACTS, and compare them, separate the truths from the falsehoods ; and, there must be some point from which these truths shall radiate, like so many rays of light, to guide each member of the profession in his toilsome, and often, for the want of the light of such FACTS, doubtful path.

We have an hospital, it is true, a monument of the kindly feelings of our more prosperous citizens to the wants of the less favored portion, which ought to fulfil much of this mission. But this institution is a sealed

book, as far as the profession or the public generally are concerned; for neither the profession, nor the public through it, receive any benefit from the vast experience which should accumulate within its walls. No clinical instruction. No statistics of disease or result of treatment, or pathological discovery. No doubtful state of diagnosis reduced to certainty, as far as I have been able to learn, have as yet been given to the profession by its faculty.

"I have," says Dr. Latham, in his lectures on subjects connected with clinical medicine,—Philadelphia edition, Lecture 2, p. 22—"always thought that hospitals are not converted to half the good they are calculated to serve as schools of medicine—and I think so still.

"I have always thought that, in hospitals knowledge is perpetually running to waste for want of laborers to gather it,—and I think so still."

"I have always thought that, in our schools every mode of lecturing has been unduly exalted above clinical lecturing; and every place where knowledge is to be had, or is supposed to be had, has been unduly preferred to the bed-side—and I continue to think this."

None of the gifted and venerable gentlemen—venerable in consequence of the position they occupy in connection with it—which implies, as in the case of Mütter, Meigs and Bell—Mott, Clarke and Charnocan—Cooper, Latham and Brodie—Stokes and Graves—Velpeau, Laennec and Louise, comprehensive and liberal minds,

lengthened observation, vast experience, profound knowledge, and an acquaintance with every thing done and doing in the various countries, have as yet been much of a benefactor to the younger branch of the profession by clinical instruction, the only instruction of real practical utility to the medical student, and the greatest benefit hospitals confer upon mankind.

"I have," says one of the distinguished gentlemen mentioned above, "considered my business to be expressly in the wards of the hospital; and I have thought myself expressly placed there to be a DEMONSTRATOR of medical facts. I use the term demonstrator, because it will at once carry my meaning to your minds; which is, that I have looked upon myself as engaged to direct the student where to look for, and how to detect, the object which he ought to know; and the object being known, to point out the value of it in itself and in all its relations."

Thus, we see, that an hospital is a spring from which ought to flow clear and limpid streams of truth and science, from which every member of the profession might drink and be refreshed. It is not the property of those gifted gentlemen immediately in charge of it; they are, or should be, only the custodians, the skilful gardeners, as it were, to plant, cultivate, mature and distribute. They should consider themselves as EXPRESSLY PLACED THERE TO BE DEMONSTRATORS OF MEDICAL FACTS which means that they are engaged to direct the student where to look for,

and how to detect, the object which he ought to know, and, the object being known, to point out the value of it in itself and in all its relations.

Have not you, Mr. President, and I, and every member of the profession, and through us, every patient we have had in charge, been benefitted by the existence of St. Bartholomew's and the Meath Hospitals, (to instance cases at a distance as of more force than those at hand,) as the poor that were received within their halls and cared for; and as the medical men have been, who listened in the wards of these famous establishments, to the distinguished and pre-eminently practical lectures of Dr. Latham, on the heart, and on acute rheumatism; and to the no less distinguished lectures of Drs. Stokes and Graves. Who of us have not been vastly instructed by the study of the London Hospital reports; the Dublin Hospital reports; Marsh's reports, and by the clinical lectures of Goddard, Bell, Latham and Bouillaud? This, sir, is not said by the way of complaint; for, in our infant state, much could not be expected, but it is to remind us, that although in infancy it is permitted us to act like infants,—in our manhood it is expected that we should act like men. It is to remind us, that, it is nigh time to put off our swaddling clothes, and indicate to those in charge of the City Hospital, that it is the vast seminary where the younger members of the profession should be taught to develope that knowledge, which will qualify them to give to the public, from whom they expect support, the benefit of its

vast experience, as well as of all the recent improvements in medical science. "My business," says a gentleman, addressing a class in the wards of St. Bartholomew's, "is with the few individual patients before me; and whatever good or whatever evil I do, would be strictly limited to them but for your presence. Yes, you are there to take note of the errors into which I may fall, that you may avoid them, and so restrict the mischief within its present sphere; and you are there to take note, also, of the good which I may do, and learn the method of doing it, and make it your own, and carry it abroad with you, that it may bear fruit a hundred fold, and be multiplied among all mankind." But as matters now stand, there is no channel in this city through which an exchange of medical sentiment can flow, or the voice of those asking for information be heard. There is no place, whence a truth discovered, can be propagated, or an error detected can be exposed, but through your society. Then, sir, I was right in saying your mission was an essential one. We will cultivate good will amongst ourselves, by commingling of mind with mind, so that each member of this society will be, as it were, the depository of all the knowledge, and all the experience of all the other members, each freely communicating whatever information he may have acquired by study, or by observation in his professional avocations.

But this society is benevolent, as well as philanthropic and scientific; for the information thus stored up in

the mind of each, is to be distributed as opportunity offers, for the alleviation of the sufferings and ills to which our poor fallen human nature is subject. These desirable objects, however, can be perfected by this society only, by the individual co-operation of its members, by each member feeling it his duty to bear a portion of the burden, and participate in its labors. It is those feelings that prompt me in accordance with the sense of the responsibilities which my membership imposes on me, to lay aside for awhile the great antipathy I have ever felt to appear, unsolicited, in the front ranks of any movement, and take myself from my retirement, to plead before your society, and through it, before the profession, the cause of a class of sufferers that is very numerous, and whose affections have not, up to this time, received from the profession in our city, that attention which their importance demands—I allude to diseases of the organ of hearing.

I must confess, that for the honor of our city, and of the profession of which I am an humble member, I have often blushed to think that in Brooklyn, up to this time, not a medical society has prospered; while in every city in Europe, half the size of it, and with less than a tenth of its prosperity—even in the little city of Dublin—not to mention Paris, London, Berlin or Vienna, several medical societies exist, where medical facts, and pathological phenomena are accumulated and verified, to be transmitted throughout the world as a portion of a debt which medical men in that quarter con-

sider they contracted, and are bound to pay to the general fund, when admitted to "the ranks of a profession which, even in its infancy—when the world was in darkness—was a glorious science, when compared with its contemporaries." It is to the zeal, the enthusiasm with which these societies* and hospitals are upheld, that, that little city is indebted for the brilliant position she occupies in the medical firmament,—that she is indebted for the production of such men as Wilde and Jacobs, Graves and Stokes, Crampton and Carmichael, Churchill and Gregory, Collins and Kennedy, and the profound Corrigan, and a host of others who have shed so much lustre on their native city, and benefit on the medical world. In other places, the minds of the members of the profession are united as if one, for the advancement of their loved science. Here, it would seem that heretofore, at least, each member was a system in himself, separated from all other interests. Here, each member seems to be a positive charged electric, the instant he approaches his fellow—they repel each other.

Sir, let the cause be what it may—however painful—truth compels us to acknowledge that this state exists, or has existed in Brooklyn—and it is only mentioned and the comparison alluded to, in order to rouse us to an effort for its removal.

* Incredible as it may appear, there are no less than thirty-three Medical Institutions in and about the city of Dublin. Six lying in hospitals, three fever hospitals, infirmaries, &c., in all of which clinical medicine is taught.

A word now as to the reasons for devoting my attention to the production of the present paper, in preference to one of a more popular and attractive nature. When a student of medicine, during a strict attendance on medical lectures, my attention was never directed to the investigation of the pathological changes taking place in the auditory apparatus. Not even in the wards of the hospital, during a long course of clinical instruction, did I ever receive a hint that the ear and its tissues were obnoxious to inflammatory affections, as well as other organs and tissues of the body. In the anatomical and physiological courses, I was, in common with other tyros in the art, taught that there was such an organ in the human body as the ear, and that in a certain portion of the temporal bone were contained the parts connected with the faculty of hearing. I was, it is also true told, that there was an external auditory passage lined with a delicate membrane, liberally supplied with follicles or cerumenous glands; that the portion of membrane lining the bottom of this passage, was called the *membrana tympani*. I was also told of the middle and internal portions—of the semicircular canals, of the labyrinth, of the *ossicula auditus*, and of the auditory nerve, and of the nerves of sensation and motion. I was further informed of the existence of an internal passage, having its entrance in the throat, and called after its discoverer, the Eustachian tube. And then I was cautioned, if disease occurred in these parts, to be careful how I interfered with it.

Now, this is about the entire information conveyed on this organ pathologically, physiologically or therapeutically, during a four month's course of lectures, repeated term after term ; whereas three or four weeks are often devoted to speculations on the seat and cause of fevers ; on the identity of, or difference between typhoid and typhus ; and sometimes a like portion of time as fruitlessly consumed in teaching the mystery and art of percussion and auscultation, and all the physical signs of disease of the heart and lungs, with all the bruite and rale, by tapping and auscultating the lecturer's desk. Not a word on the pathology of the affections of the ear, or of the therapeutical method of relief. Not a word of admonition as to the danger of incipient inflammation in any of these tissues. Not a word as to the frequency of obstruction in the Eustachian tube in certain affections ; or of an accumulation of cerumen in the external auditory passage ; or of thickening ; or opacity of the membrane of the tympanum ; or of polypus ; or of abnormal growth of hair—all the result of inflammation, and the sure precursors of deafness. I was told nothing of all this.

Who has not felt, before he had been long in the practical discharge of his professional duties, the deficiency of such an education in relation to the affections of so important an organ ? Who, that has been to any extent engaged in the management of infants, has not witnessed twitchings and spasms, and even convulsions, for which it was impossible to find a cause or a remedy,

until the membrane of the tympanum gave way from pressure behind, and allowed the discharge of puss through the external ear, which suddenly explained the cause, and removed the spasms and convulsions? Who can explain the perplexity of the young physician, who heretofore looked upon his teachers and class-books as complete and infallible, when he looks over his note-book to find what THE professors taught him on this class of affections; and consults his class-books, one after the other, with the bitter mortification of finding one and the other silent; nay, worse than silent, on the matter. In the writings of Cooper, (both Sir Astley and Samuel) Druit, Saunders and the like, instead of instructions he meets with lamentations over the neglect paid by practitioners to this branch of pathology.

But this did not deter me,—I sought information from this physician and that, whose position and talent would presuppose extensive information on all medical subjects, and received in reply, that “Aural medicine was not appreciated!” “would not pay!” Yet, I determined still to seek, and had the gratification to find that there were in the ranks of the profession a few investigators, more intent on the advancement of medical science, and benefitting mankind, than the accumulation of sordid wealth; who devoted the energies of great and exalted minds to the special investigation of the Ear and its diseases; and that in many cities of Europe, and in Russia, aural medicine is as well cultivated a ophthalmic surgery is amongst us. The work of Dr.

Kramer, of Berlin, on "the Nature and Treatment of diseases of the Ear," which was republished in Philadelphia in 1838, had the merit of first directing the attention of the profession in this country to the study of Aural Medicine and Surgery, but I regret to say that the number who applied themselves to these investigations, was very limited, and the zeal with which the subject was pursued was not of the most enthusiastic nature, nor commensurate with its importance; however, it roused the Aural Pathologists of Europe to increased efforts for the improvement of that branch of our art; and dispensaries, for the treatment of diseases of the Ear, were soon founded in all the chief cities of England and Ireland. In this paper I shall direct attention to the neglect which aural affections have received from the profession generally, and the consequences of that neglect; also, to the labor bestowed on them by some of the most able investigators, and the benefits resulting from that labor; but I shall first show that the improvements in the various branches of pathological science are due to special investigation directed to the state of particular organs in health and disease, and that without special attention they would have remained in that doubt as to diagnosis and treatment, in which they were but a short time ago involved, and in which aural affections are still involved for the want of that investigation.



AN ESSAY

ON

DISEASES OF THE EAR.

Since the days of Hunter, Physiologists and Pathologists have done much for the advancement of the diagnostic, therapeutic and symptomatic branches of our profession. The viscera of the thorax, abdomen, and pelvis have each been submitted to the special and thorough investigation of pathologists, and the fruit of these investigations are immeasurable. Ophthalmic and Dental Surgery and Medicine, have, since that time, almost, become distinct arts, although both physicians and surgeons in general are well informed on all the pathological changes to which the organ of vision is obnoxious, as well as of the improved method of treating them; but the affections of the auditory apparatus, although meeting with marked attention lately from a few able and ind-fatigable investigators, have not been cultivated by the members of the medical profession, generally, or by physiologists. The same obscurity now exists in regard to diseases of the Ear (speaking of the auditory apparatus as a whole) that twenty or thirty years ago existed as to disease of the heart, lungs, or alimentary canal. Yet, the diseases of all these parts are now well understood, and the mode of treatment much more certain and reliable. To point out some of these changes will be the chief aim of this paper.

Laennec first taught us the use of our Ears and

other acoustic instruments in the diagnosis of disease of the chest, but more especially in those of the heart. Whilst we acknowledge, with gratitude, the great benefit thus conferred upon our art; and that we could never have arrived at the perfection we have now attained in our diagnosis of the dynamic or functional and organic diseases of the important organs, within this cavity, without the aid of his splendid discovery, it must not be concealed that had we continued to receive his teachings in full as infallible, and as admitting no further investigation, we never could have deduced therefrom practical results commensurate with the hopes they had given rise to. On his authority, it will be remembered, we were taught to believe, and some do still believe, that the second sound of the heart was caused by the contraction of the auricle, and he made all murmurs coincident with this sound of the heart or contraction of the auricle, to denote disease of the valves, which immediately succeed the auricle in the course of the circulation. And as a consequence of this error he taught us another—namely, that the contraction of each cavity of the heart was the cause of the murmur which proceeded from the injured valve immediately beyond itself. The systole of the left ventricle produced the murmur when the aortic valve was injured; the systole of the left auricle when the mitral valve was diseased. But pathologists did not sit down content with the mere theory of the immortal Laennec, nor did they despair when they followed the subject to the dissecting table and found the results contradict the theory, but pursued the investigation, until Stokes, of Dublin, to his honor be it confessed, showed us in addition to the distinguishing marks between disease of the internal and external membrane of the heart, that, a valve partially closed that ought to be wholly closed, or partially open that

ought to be entirely open, not only admits a sound by the current in its onward course, but in its return also ; hence, the murmur of regurgitation.

The Eustachian tube, the cerumenous glands, or the ossicula auditus, are not more distant from our view, nor obscure, than the aortic valve, or the mitral, and as industrious investigation has removed a portion of the obscurity in which affections of the valves were involved, industrious and scientific investigation can, and will remove, the physiological obscurity in which those parts are involved, if the attention of those qualified can be brought to a sense of the importance of such investigations.

A few years ago, the most eminent in zeal and talent were unable to distinguish between endo-carditis and peri-carditis ; were unable to anticipate their approach, or recognise their presence in acute rheumatism. Physicians could say that trouble existed in or about the heart, that its functions were impeded, but of its exact nature or seat our ideas were confused and uncertain. We heard sounds, other than those we were accustomed to call first and second sounds, and synchronous with the systole or with the diastole, and we called them hard unpronounceable names, in a strange tongue ; to make the mystery doubly mysterious, we called them *bruit* and *ralé*, (*bruit de râpe*, *bruit de scie*, ou *bruit de soufflet*,) blowing and rubbing, cooing and whistling, but whether any and which of these sounds indicated disease of the external or of the internal membrane of the heart, who could say ? Indeed, no body knew, until Dr. Latham taught the fact, that whenever the heart was affected in acute rheumatism, which occurred in 90 cases out of 136, a sound, different from the sound of health, always accompanied its contractions. Did Dr. Latham, by this, discover a new disease ? No ; he only

by close clinical observation, made evident, what had been for the very want of that observation, hidden—in his own words, “made that the subject of sure diagnosis which was before hit upon by chance.”

Here is great fruit produced from paying special attention to a special organ, and to its special changes in a special disease. The Ear, certainly, is not more hidden than the heart's investments, and the same attention to its first admonitions of disease may prevent future mischief to the organ.

It was not until Bouillaud taught us, we were able to attribute the bellows or blowing sound of the heart as pathognomonic of inflammation or irritation of its lining membrane. And how did Bouillaud make this important discovery? Was it by denouncing specialities, as some gentlemen are pleased to term such investigations? He says—“That we have attentively sought peri-carditis and endo-carditis, and that others have not sought them. And certainly to find we must seek, AND SEEK WITH MUCH CARE, and with a perseverance that no hing can weary or divert from its purpose.” Nor could we, till Drs. Stokes and Watson, for both, about the same time, and seemingly without the knowledge of each other's investigations, separated the blowing and rubbing sounds of the heart from each other, and analyzed them apart. These indefatigable and gifted men, by persevering industry, and close and long continued observation, directed to a special object, showed that the attrition sound of the heart was produced by two surfaces moving to-and-fro upon each other, and traced them home to their local origin the pericardium. How easy it is now for the attentive student to master, by ordinary industry, this formerly so difficult a subject. He need not trouble himself about the cooing, the bellows, the whistling sounds, the bleating, the rasping, the sawing, the to-

and-fro sounds, he has only to bear in mind that blowing or puffing, or the like, no matter the key or the variety, so as it is blowing or puffing is pathognomonic of endocardial trouble; and that rubbing or rasping, or to-and-fro sound, is as indicative of pericardial trouble; and, that where a mixture of those exists there exists, also, a mixture of endo-cardial and pericardial disease; but in the case of either he can say, here we have endocarditis—there, we have peri-carditis.

With the same amount of industry, and even less talent, may we not hope to see some future physiologist or pathologist reduce the symptoms of affections of the auditory apparatus to the same results as those of the heart. Surely the membrana tympani is not more concealed than the peri or endo-cardium, and yet, little in general, is understood of affections of the former membrane.

We have not only learned to detect the presence of peri and endo-carditis in acute rheumatism, but we have, by the industry of Bouillaud, arrived at the probable cause of that occurrence. M. Chomel, in an essay, denied the termination of articular rheumatism by suppuration. This called special attention to the subject, the consequence of which was, that Bouillaud found that M. Rasibroski had reported one case that had so terminated; M. Moreau, two cases; M. Cruveilhier, in his paper on puerperal rheumatism, reported three cases, and Bouillaud, himself, two cases of acute rheumatism that terminated by suppuration. The practical deduction from these facts is, as the latter seems to indicate, that the true and chief seat of acute rheumatism is in the serous or synovial membrane of the joints; hence the susceptibility of the serous investments of the heart to take on inflamma-

tion, or some painful affection in acute rheumatism, through sympathy of tissue.

Again we find that, that peculiar and interesting pulse called, "*bis feriens*, or *dicrotic*, or *reflux*, or *venous pulse*," so long a subject of doubt and perplexity to pathologists, has been brought to a state of probable certainty, by the labors of Bouillaud, whose motto is, that in order "to find we must seek, and seek with much care, and with a perseverance that nothing can weary or divert from its purpose."

In a patient in whom this reflux or venous pulse was distinctly marked, he not only felt this double movement in the radial artery, but traced it to the arch of the aorta, where it was evident at the hollow of the sternum. He saw the column of blood in the jugular vein descending during the diastole of the right ventricle, then reflowing into the vein during the *systole* of the same ventricle, the valve of which was defective; from which he conjectures that, it might be produced by what he calls "*the aspiration*" of a certain quantity of arterial blood during the diastole of the left ventricle, allowed by the insufficiency of the aortic valves. This conjecture, it will be recollected, is in harmony with Dr. Stokes' theory of the murmur of regurgitation, but it is only a conjecture and not sufficiently tested, or sanctioned by other pathologists, it is only alluded to, to show that it has been considered worthy of *SPECIAL* investigation by that eminent physician.

Broussais was not always right, the principals he inculcated were not always founded on facts, and were not staple; but who will deny him the credit of having indicated the way to a just and scientific practice in gastro-enteritic diseases. He was the means of directing the attention of impartial and scientific investigators in the right direction; and it must be admitted that,

the subsequent investigations of many pathologists have proved many of his theories, which were at the time disputed, as regards the diseases of those viscera in fever—correct. Who now thinks of treating flatulency, constipation, dyspepsia, biliousness, and acidity, (terms until lately used as masks for ignorance) as idiopathic diseases? They are, by the advance made by pathologists in this special branch of medical science, assigned by all well educated medical men as symptoms or effects of disease, rather than disease itself, and the cause sought out and removed. Would not a medical man be deserving of something more than contempt who should, in the present state of our pathological knowledge of the alimentary canal and its diseases, attempt to remove constipation by drastic purgatives, acidity or gastric irritability by emetics, flatulency by carminatives, without troubling himself to know whether the constipation, acidity, vomiting or flatulency was the result of inflammation, irritation, debility, sympathy or nervous torpor? But such things were, and might have continued to be, had not the attention of pathologists been turned in this SPECIAL direction.

Are not the parts concerned in the functions of hearing as cognizant to our senses, as the parts concerned in the functions of digestion; and if the same amount of interest be manifested in investigating some abnormal symptoms of affections of the Ear, as tinnitus, dullness of hearing, &c., may not the true cause of these symptoms be discovered, and thereby a key to their cure?

Another subject of much interest and importance, long in doubt and uncertainty, seems to have, in consequence of the attention given to the subject by some of our best observers, and most zealous and successful pathologists, made some advance towards certainty,

namely, the recognition of some reliable symptom indicative of the proper time and mode of administering wine and other nutritious articles, in fevers and febrile diseases. Up to a very late period, it is strange to say, that the directions given by Hippocrates twenty two or three hundred years ago, had the advantage of being more intelligent and simple, if not more reliable than any to be met with in modern books, which were, "that we were to be guided by the state of the sputa and urinary sediments; that is when the sputa put on a purulent appearance, and the urinary deposits become copious and reddish."

Dr. Tweedie, certainly one of the most distinguished of modern authorities, recommends us to be guided principally by a cool skin, and soft pulse when combined with debility.

In regard to the cool skin it may be interesting and instructive to hear how "the Father of medicine" holds this symptom up as fallacious and unreliable. He says:—

"When the feet are cold, give neither drink nor ptisan, nor anything else of the kind, but reckon it an important rule to refrain until they become warm, and then you may administer them with advantage. . . . For the most part, coldness is a symptom of a paroxysm of the fever coming on; and if at such a season you apply these things, you will commit the greatest possible mistake, for you will augment the disease in no small degree."—(Works of Hippocrates Sydenham Society, vol. 1 p. 318).

And now in regard to the pulse, the other indication of Dr. Tweedie, it may be no less interesting and instructive to quote the manner in which Celsus, who, like the former authority, is venerable for its antiquity, rebukes

those of his day who trusted to that symptom as a reliable indication.

In speaking of the proper time for the administration of drinks, &c., in fever, Celsus says :

“We principally trust the pulse—a most fallacious mark (*venis enim maxime credimus, fallacissimæ rei*)—because this is often slower or quick from the age, and sex, and difference of constitution—and generally when the body is in pretty good health, if the stomach be weak; sometimes, also, in the beginning of a fever it rises and sinks, so that a person may seem to be weak, when he can very well stand a severe fit that is just approaching. On the other hand, the pulse is often raised and the vessels relaxed by the influence of the sun, and of the bath, and exercise, and fear, and anger, and any other passion of the mind; so that when a physician first comes in, the anxiety of the patient, doubtful how he may think him, accelerates the pulse. Now, if the sight of the physician quickens the pulse, how easily may a thousand other accidents disorder it.”—(A. Corn. Celsi Medicinæ, Lib. vi p 74.)

Fortunately for the credit of our modern school, in this instance, we are not called upon to decide between Hippocrates and Celsus on the one hand, and Dr. Tweedie on the other; for M. Littre lately called attention to another indication, which Mr. Francis Smith, the excellent translator and annotator of the “Genuine Works of Hippocrates” for the Sydenham Society, called a most important one, provided it was confirmed by time and experience. It is an auscultatory sign laid down by Dr. William Stokes, of Dublin, and is, “that when the impulse of the heart is abnormally weak, and when there is a diminution of the proportion between the two sounds, wine may be freely administered.”

We have already acknowledged our indebtedness to

Dr. Latham for having taught us not only when to suspect the approach, but how to recognize the presence of, endocardial or exocardial disease in acute rheumatism, and how to distinguish the one from the other. We have now to pay a like acknowledgment to Dr. William Stokes, for the zeal and success with which he has for a whole year devoted his great energies to discover the symptoms of the heart occurring as the secondary local lesions of typhus. He has taught us by these experiments that to discover these local lesions the pulse is an uncertain guide, and that while the application of the hand and the stethoscope are both indispensable to detect them, either by itself is defective. He has taught us that softening of the heart seems to be one of the secondary local lesions of typhus. How that softening is to be recognized by diminished impulse, or a complete absence of impulse—by a diminished first sound, or even an absence of the first sound—that in most cases the diminution of the impulse and first sound co-exist, yet that impulse may exist without corresponding first sound, and conversely, the first sound may be heard, although unaccompanied by impulse—these phenomena are most evident, as connected with the left side of the heart.

Dental Surgery is a new branch of medical science. It has been taken possession of by a class of men by talent, by education, and by special study, every way qualified to advance it to the rank of a science—men who devote their whole time and attention to its improvement, and whom it rewards with its golden harvest. Yet, we know that what existed of it a few years ago was nothing more than a mechanical art, little understood and practiced. Fifty years ago, if a person lost a tooth, it was no easy or trifling circumstance to supply the deficiency, and it was to the shop of the jeweller he was most likely to apply for a substitute; but now any num-

ber of teeth may be supplied at a moderate cost, that perform all the offices and functions of—and not to be distinguished even by the wearer from—the natural teeth, and by well-educated physicians. If further evidence be wanted of the utility of paying special attention to a special branch of the medical art, I need only refer to the ease with which that deformity, arising from the irregularity of the teeth, particularly the incisors and the cuspidati, is now, by the skill and dexterity of the well-educated dental surgeon, removed without extraction, and almost without pain. I saw in the office of a dental surgeon some time since two models of the teeth and gums of a gentleman's lower jaw—one representing the form and position of the teeth before an operation, with the teeth riding one above another—and the other representing the same after the operation, with the irregularities removed, and each tooth in its natural position. A tooth lost or misshaped is a greater drawback to personal appearance than dullness of hearing or tinnitus, hence, in addition to the greater profit to be derived from dental than aural surgery, the influence of personal appearance is brought to bear to favor the cultivation of the former.

The voluminous works of the highest order of merit that teem almost monthly from the medical press, and fill our medical periodicals, are evidence sufficient that ophthalmic medicine is not neglected, but receives that attention which so important a branch of medical science merits, not only from its special devotees, but from the members of the profession generally and from the public.

The truth of these remarks will appear evident when we consider the number of cases of loss of vision that was formerly attributed to what was called gutta serena, a term now scarcely to be met with in modern books. After this, it will be recollected, we had glaucoma as a

frequent cause of blindness, although such writers as Tyrrell, Lawrence, Mackenzie, Jacob, and Walton differed from each other as to its seat and nature. At a later date we had, in consequence of the improved method of observation, reduced both of these affections to a very small compass, under the title of amaurosis; and still as our knowledge increased with experience and observation, and as physicians became familiar with the different forms of congestions and other diseases of the choroid; and the latent inflammations which occur in the various tunics of the eye amaurosis itself became less frequent, so that at this date, owing to our improved pathology and diagnosis, true, uncomplicated amaurosis, not resulting from disease of the brain or tumors within the orbit, is said to be of rare occurrence.

I might, if I did not fear to swell this paper to too great a length, direct attention to the improvements taken place in the pathology, diagnosis, and treatment of affections of the kidneys, liver, gestative and urinary organs, but it is sufficient for my purpose to direct attention to the fact, that whatever improvement has been effected in these and other organs is due, and due solely, to the special investigations bestowed upon each, and that the improvement is in proportion to the amount of industry displayed; and, further, that if the affections of other organs and tissues are still in doubt and uncertainty, that that doubt and uncertainty is also in proportion to the neglect with which such organs have been treated.

Thus by care, close observation, and special attention to special organs, we have advanced our knowledge of the symptoms and treatment of the circulatory, respiratory, masticatory, visual, and digestive systems. Not only the stethoscope, organic and in-organic chemistry, but the microscope have been made subservient

to our use in the diagnosis of affections of those and kindred organs.

But there is one organ of the body—THE EAR—the physiology of whose parts is but little understood, and the affections of which have received no consideration from the profession. Magendie says—“This organ is very complicated; at present we know but little of the uses of the different parts that constitute this apparatus.” It may, I think, be laid down as a rule in medicine, that in proportion as our knowledge of the physiology of an organ advances to certainty, does our diagnosis and therapeutics become settled and successful; for, as the pathological state of an organ increases in proportion as it deviates from its physiological condition, it must appear evident that we must know what that condition is, in order to preserve it in its integrity, and aid it in regaining its original position.

Mr. Wakeley, in a clinical lecture on Glycitrine *Lancet*, Lon., 1851., v. 1, p. 291, says:—

“In the treatment of deafness, failures of new remedies are the more likely to happen as aural maladies find no favor with the majority of the profession. Many empirics owe all their success and ill-acquired wealth to this cause.”

These opinions are further supported by an eminent authority, who writes:—“It is not many years since diseases of the ear were a subject on which the greatest ignorance, and the most mistaken opinions, prevailed, and indeed how could any correct pathological information be expected when anatomists had not given a complete and accurate description of the organ itself; also, notwithstanding what has now been made out respecting disorders of the Ear, it is generally admitted that they require further investigation and renewed industry.”—(Cooper's Surgical Dictionary—Article Ear.)

I am lead to suppose that this society, indeed the profession generally, view this subject as devoid of interest and unimportant—I cannot believe it. How can a class of men, who individually and collectively have ever been formost in the ranks of science, as well as in soothing the sorrows of our poor human nature, be without interest in a question in which so large a number of our fellow creatures is so deeply interested, as I shall show by-and-by, by a reference to the statistics of institutions established in various parts of Europe, for the cure or alleviation of those unfortunates, deprived in part, or in whole, of the most intellectual, if not the most prominent and useful of all our senses—hearing. I know by close observation for the last few years—it is incredible to a person who has not given special attention to the subject, the great number to be met with (even in this community)—laboring under deafness, or dullness of hearing, or some disease of the Ear, which if left unchecked, or to the management of ignorant quacks or nostrum venders, is sure to lead thereto. Devoid of interest! It is deserving of our highest consideration, in as much as affections of the organ of hearing are, when treated in time and with judgment, which is not just now always the case, as subject to the rules of a rational and scientific pathology and therapeutics for their prevention and cure as the affections of any other organ in the animal economy.

As a proof that I am not alone in this view, I shall take the liberty of introducing a few eminent witnesses to testify on this head .

Druit, in his excellent work, “ The Surgeons’ Vade Mecum,” says .

“ That deafness is so common and so distressing an infirmity, and, when of long standing, is so incurable, that we cannot too strongly urge upon medical practi

tioners to make themselves familiar with the treatment of diseases of the Ear. They should also encourage their patients to apply to them for the relief of slight and incipient ailments in this organ, instead of allowing them to go on till they get permanently deaf, and then letting them fruitlessly seek relief from ignorant and mercenary quacks."

And Mr., afterwards Sir Astley Cooper, in an Essay published in 1801, on the perforation of the membrana tympani, thus expresses himself:

"I hope others will be induced to second my feeble effort, and to direct their attention to the subject which appears to be of the highest importance, and to have been TOO MUCH NEGLECTED BY MEDICAL MEN; for a knowledge of the structure of the Ear is by no means general in the profession, and still less are its diseases understood. A prejudice has prevailed that the Ear is too delicate an organ to be operated upon, or, as it is commonly expressed, 'tampered with;' and thousands have thus remained deaf for the rest of their lives who might have been restored to their hearing had proper assistance been early applied,"

A more modern, but not less eminent, authority says: "Mankind have often imposed on themselves the ungrateful task of complaining of the neglect with which diseases of the Ear have, up to the present time, been treated, both by authors and practitioners. There was, indeed, good ground for such complaints, when one compared the number and utility of the works that treat of diseases of the Ear on the one hand, and those of the Eye on the other. And the very disproportionate superiority of the latter was remarked, when further, it was considered that the organ of sight in its influence on the mental and intellectual life of man is certainly

rather inferior than even equal to that of hearing.”
—Dr. Kramer’s “Diseases of the Ear;” Dr. Bennett’s Translation. p. 1.

Mr. Pilcher, in the introduction to his Prize Essay on the “Structure, Economy, and Diseases of the Ear,” for which the Fothergillian Gold Medal was awarded in 1842, uses the following emphatic words :

“It might have been anticipated that the immense improvements which have been introduced into ophthalmic surgery by the labors of some of the most distinguished of our profession, would have induced the educated practitioner to investigate those numerous diseases of which the ear is obnoxious—such unhappily for mankind has not been the result, and thus it happens that even at the present time—in this country at least—Aural Surgery is either almost entirely neglected, or, for the most part, is left in the hands of the ignorant empiric. In consequence, therefore, of what must be considered a dereliction of duty of the English surgeon, the unfortunate sufferers from these distressing maladies are, in many instances, abandoned to their fate, or compelled to seek relief from the employment of nostrums which it would be but too charitable to regard as being merely harmless in their operation.

“It is not too much to affirm, that until the morbid affections of the Ear be treated according to the general principles of pathology, ‘and more especially until the study of these affections be regarded as constituting a necessary and essential part of medical education, it would be vain to hope for any considerable extension of the very limited knowledge which is at present possessed on this interesting class of diseases.’”

We have special works on diseases of the larynx, trachia, bronchia, on rupture, liver, kidneys, generative organs, and even on the rectum. So we have, it may be

answered, on the Ear. True, as I shall show by-and-by—still there is a difference—this marked and important difference—no physician who lays claim to the title of general practitioner would presume to acknowledge himself totally ignorant of, or incapable to treat, affections of these organs; but not so with affections of the organ of hearing, as we have seen from the eminent authorities quoted, and shall again see from others yet to be cited. Physicians justly considered eminent, and some occupying high places in our medical seminaries, think it no dereliction of duty to neglect the study of the pathology of affections of this organ, and will not hesitate to acknowledge without a blush that they never treat disorders of the Ear, or if they do, that they confine their treatment to simple washing with Castile or other soap, and a drop or two of almond oil into the meatus, never troubling themselves to find out whether the affection is the result of interruption in the Eustachian tube, ulceration in the middle Ear, or opacity or thickening of the membrane of the tympanum or other integuments of the external meatus, in any of which cases these remedies are not only useless but injurious. How few, in affections of the external meatus, ever take the trouble to examine the state of that passage?—yet obstructions in it are a very frequent cause of deafness, and it is as much under view with the proper speculum as the os or cervix uteri; and the information to be derived from inspection in the former more certain and satisfactory than in the latter, and the indications, to say the least of it, as reliable.

Let us state a case by way of elucidation. Two young ladies wait on their medical advisers—the one complains of pains or weakness in the back, irregularities in the menstrual flow, palpitations, &c. The other of a confused sensation in her ears, dulness in one or both ears,

with occasional pain or itching in the external canal, or perhaps a throbbing sensation between the angle of the jaw and the mastoid process, since her last attack of tonsilitis or rheumatism. Now, what is done in each particular case? In the former, the generative organs are subjected to ocular inspection, and if insipient inflammation, or even irritation be there discovered, remedies are instantly applied for its subjugation, lest it run on to disorganization of the parts. And in the latter—in the latter case what is done? Why it is exactly let run on to disorganization of the parts! No inspection of the external meatus to discover the state of that passage, although Dr. Wild reports in his book on “Diseases of the Ear,” 579 cases of impaired hearing, produced by impaction of the external auditory passage with cerumen, the removal of which restored the organs to their integrity and the patients to their hearing; and although Celsus, eighteen hundred years ago, Hil-danus and Nuck, two centuries ago, recommended and practised ocular inspection of that passage. No examination of the Eustachian tube, although Dr. Kramer demonstrated that obstruction in that passage is a most fruitful cause of deafness; and although it is now one hundred and thirty-four years since Guyot, of Versailles, suggested the introduction of a flexible tube into the Eustachian canal through the mouth; and one hundred and twelve years since Clelland taught us to introduce a catheter into the same passage through the nose, and remove its obstructions by aqueous injections; and as if Itard, Deleau, and Kramer had not improved and simplified that operation. Thus multitudes are permitted to lose the greatest gift of the Creator to his creature for the want of the same precaution that is used to preserve other organs. Is not insipient inflammation and irritation subject to the same laws of treatment for their

reduction in the Ear as in other parts of the animal economy ?

The following quotations prove that they are. Mr. Wilde says :

. . . . " Yet I fear not to reiterate the assertion which I made upon several former occasions, that if diseases of the Ear were as well studied by the generality of practitioners, and as early attended to as the diseases of the eye, it would be found that they were as much within the pale of scientific treatment."—(Wilde on the Ear, p. 21.)

" My opinion," says Dr. Kramer, " regarding the curability of diseases of the Ear in general, is founded on the results of 300 cases, as they have been recorded in my journal, &c.

" Of these 300, 104 were found to be quite incurable, incapable of being at all relieved, and with the treatment of which, therefore, I took no trouble ; the proportion, therefore, is one to three. On the other hand, 188 were completely cured or relieved by treatment, whilst only eight of those who were actually put under treatment were obliged to be left unrelieved, in spite of all the pains and care bestowed.

" Of the incurable patients, and those who derived but little benefit, the greater number certainly would have had a more favorable, or even an altogether happy lot, had they only submitted themselves in time. . . to proper treatment, or even if they had not been subject to treatment so improper."—(Kramer's Diseases of the Ear, &c., p. 24.)

How is it, then, may I be permitted to ask, that physiology and pathology have done so much for the prevention and cure of the diseases of other organs, and so little for the prevention and cure of diseases of the

Ear. Some answer, the organ is so delicate in structure, so intricate, and its maladies so insidious and incurable that it is bad to "tamper with it." All this, be it remembered, may and has been said of the eye. Yet, who of us now will neglect or delay the reduction of the most trifling inflammation of its tunics, knowing that if it be neglected in its earlier or insipient state, it may and will progress from tissue to tissue, until it ultimately reaches the cornea, retina, and optic nerve, and destroys all visual intercourse with the external world. Will not catarrhal affections of the internal and external Ear, interruption in the Eustachian tube, edima or ulceration of its meatus, caused by Aphtha in infancy, Tonsilitis or Parotitis, Measels or Scarlet Fever in childhood, will not inflammation of the membrana tympani, a collection of cerumen in the external meatus?—will not all, or each, or any of these lead to dulness of hearing, ringing or noise in the Ear, or finally to irremediable injury to the auditory nerve, and its inevitable consequence—deafness? And are they not all under the control of our art, if that art be timely and judiciously employed in their first stages, as if occurring in any other organ? The experience of all those qualified to judge in the matter, answer emphatically that they are; yet, who in the regular ordinary course of his professional duties ever thinks of examining the external meatus with the aural speculum, injecting the Eustachian tube, and applying the autoscope to know the state of those parts; and yet the early neglect of such precaution subjects the patient to the risk of losing his hearing beyond remedy. Dr. Roget says, *Outlines Physiol.* p. 274 :

"Hearing is always much impaired, if from any cause the Eustachian tube is obstructed, as it sometimes is, by a common cold, which then produces a temporary deafness."

“There are many pathological facts which prove that the integrity of the Eustachian tube is essential to the perfect function of the Ear. When, from any cause, this passage becomes closed or obstructed, the hearing is very materially impaired, while it is restored by removing the obstruction.”—(Dr. Bostock's *Elementary Syst. Physiol.*, 4 Ed. Lon., p. 720.)

“‘This canal (Eustachian),’” which is of great importance in surgical practice, on account of the frequency of its diseases, and the operations which they require. . . . Its internal membrane is a continuation of that of the pharynx, and its nature renders it susceptible of the same diseases with the mucous membrane of the pharynx.”—(Velpéau's *Surgical Anatomy*, Vol. I p. 28.)

“‘The delicate membrane,’ says Dr. Velpéau, ‘lining the auricle, encloses numerous follicles, in which sabaceous matter sometimes accumulates and concretes, forming small encysted tumors (loupes), known by the name of tannes (*acne punctata*). There is a cellulofibrous layer, very dense, but lamellated, separated from the cutaneous envelope by a more supple cellular tissue. When small purulent abscesses form in this last layer, they excite but little pain, but sometimes burrow with great rapidity under the skin, giving rise to intractable sinous ulcers. When these abscesses are developed in the former tissue, they occasion very acute pain, and sometimes very formidable symptoms.’”—(Velpéau's *Surgical Anat.*, Vol. I p. 24.)

The lymphatics of the Ear, according to Mascagni and Cruikshank, pass to the parotideal absorbent glands, and the swelling which takes place in these glands, in consequence of certain diseases of the external Ear, seems to support this opinion; and it would seem to be still further supported by the following case stated by

Velpeau:—"A man who had labored under pustular inflammation of the intestines during twenty-six days, was attacked by parotitis, and six days afterwards the matter made its way into the Ear through the fissure of Santorini."—(Sur. Anat., vol. i. p. 26.)

"The obliteration of this tube (Eustachian) is a frequent cause of deafness."—(Magendie's Elem. Trea. Human Physiol., p. 87.)

"The Eustachian tube," says Müller, "is never absent when the tympanum exists. Its great importance in rendering hearing perfect is proved by the circumstance of its occlusion as a consequence of disease, being always attended with deafness and tinnitus."—Elements Human Physiol., p. 760.)

And again:—"All the provisions by which the tympanum has been adapted to the better propagation of sound would be rendered unavailing if it were to become filled with mucus."—(Op. Cit.)

The ancients were not ignorant of the frequent occurrence of inflammation in the Ear, nor of the necessity of paying immediate attention to the first admonitions of disease in that organ, nor of the dangers to be apprehended from the neglect of such admonitions, notwithstanding it is the fashion with some writers to decry everything coming from our predecessors as worthless, of no practical value, as if truth ever grows old. These writers, no doubt, are ignorant of the fact, that if their own pages were divested of all the matter pilfered from ancient authors without acknowledgment, they would no more resemble their present form than the strong intellectual man, from whom the immortal spirit had fled, resembles the lump of mouldering clay that is left without life or usefulness.

Celsus thus directs attention to be given to the first symptoms of diseases of the Ear, in consequence of the

danger to be apprehended from delay. He says:—
“*Aurium inflammationes doloresque, interdum etiam ad dementiam mortemque præcipitant. Quo magis inter initia protinus succurrendum est, ne majori periculo locus sit*”—(A. Corn. Celsi, *Medicinæ*, lib. vi. c. vii., *De aurium morbis*).

It is only a few years since the wisdom and necessity of such precaution have been fully demonstrated.

Mr. Toynbee, in 1851, read a paper before the Medico-Chirurgical Society of London, recording 41 cases of fatal cerebral disease, originating in the tympanic cavity, in most of which discharge from the external meatus had been for many years the only symptom.

Mr. Part read a paper before the London Medical Society, detailing a case of a similar nature, and concluded, almost in the words of Celsus, by calling the attention of the Society to the importance of attending to cases of this description in the early stages, when the discharge, often unattended with pain, is the only symptom which the surgeon or physician has to guide him.—(London Lancet, 1854, vol. I p. 172.)

The following passage is strongly in support of these views :

“The apparatus of hearing is simple, very securely placed, and much less prone to disease than that of vision. Its morbid conditions, however, are much less within the control of art. The cerumen sometimes becomes inspissated, and accumulated in such quantity as to close up the external opening, and cause deafness. Perhaps the most common disorder of this apparatus is obstruction of the Eustachian tube. Catarrhal affections, which are so common in all climates and classes of persons, are generally attended with more or less inflammation of the posterior fauces. The inflammation is apt to extend up the lining of the Eustachian tube, and

from the consequent tumefaction or morbid secretion, the tube becomes obstructed and the air confined in the cavity of the tympanum. Thus the free oscillatory movements of the tympanum are impeded, and deafness produced."—(Magendie's Human Physiology, by Dr. Revere, N. Y., p. 90.)

Before I direct attention to the successful results of the treatment of affections of the Ear, as presented to our view in the statistics published by gentlemen in charge of public institutions for the treatment of those affections, I shall quote the manner in which a celebrated Surgeon and Aurist spoke of the neglect of those affections fifty years ago, and of the manner of remedying them :

"Few attempts have hitherto been made by anatomists to investigate the morbid changes to which the Ear is liable. On this head we are almost destitute of information, at a period when by their labors the diseases of the other organs of the body have been ascertained and the symptoms which accompanied them recorded. But our ignorance will soon cease to be the cause of astonishment, if we reflect on the obstacles which oppose our inquiries. These are almost insuperable. Nature has placed the greatest part of the Ear in a situation absolutely beyond the reach of examination in the living body ; and as its diseases are rarely, if ever, mortal, MORBID EARS ARE SELDOM DISSECTED in the dead. Such observations as are related have mostly been made on subjects that have casually fallen into the hands of the dissector, and the history of the case is unknown. But it would not suffice if anatomy were able to develop every morbid alteration of structure of which this organ is susceptible. A great object would, indeed, be gained, but a greater would still remain unaccomplished. Before the mind of the practitioner can be directed to

any determinate object, a history of symptoms must be sufficiently distinct. This demands a multitude of dissections and a series of attentive observations.

“ Here, then, the labor and the difficulty commences, but the field is open. Anatomists have, to the present day, avoided this subject, some doubtless convinced of the impracticability, and others disgusted at the difficulty of the inquiry. As anatomists have neglected the investigation of these diseases, so practitioners have either abandoned such patients to quacks, or consigned them to the care of Providence.

“ But although I admit the difficulty in all instances, and in many our total inability to obtain an adequate knowledge yet I must differ from those who think that such cases should be abandoned. I am convinced that the subject may be very much elucidated, if many individuals, having great opportunities of examining dead bodies, and animated with proper zeal in the inquiry, would employ some portion of their time in the dissection of such diseased Ears as chance may subject to their inspection. By this proceeding many facts respecting defects or diseased changes of structure in the Ear may soon be obtained. In many instances, where a previous acquaintance with the patient affords the opportunity, the attendant symptoms may be ascertained. Thus the observer, combining in one view the cause and the effect, may be capable, in many instances, of inventing means of relief.”—(*Anatomy and Diseases of the Ear*. By J. C. Saunders, Demonstrator of Anatomy in St. Thomas's Hospital, and Surgeon to the London Dispensary for Diseases of the Eye and Ear. Lon. Fol., p. 21.)

Instead of apologizing for this long quotation, I ask for it special attention. Mr. Saunders' book—valuable, as it is, to the student of aural pathology, may not be within the reach of all. It is due, as a matter of

justice to its author, that a passage that so clearly indicates the way to all the improvements that have since taken place, and the method of effecting them, should be generally known, that we may render unto Cæsar the things that are Cæsar's. Whether we refer to the physiological investigations of Magendie or Müller; to the pathological of Itard, Himly, or Deleau, to the diagnostic or statistical of Kramer, Wilde, or Tschanner or the dissections of Toynbee—all, all are clearly indicated in the above citation.

‡ Mr. Wilde says :

“ I do not profess to invent or introduce new remedies. I try to make the well-established rules of practice in the treatment of other organs applicable to the management of aural diseases. Like most students, I was taught during my apprenticeship theoretically to believe, and practically to observe, that we ‘ knew nothing about diseases of the organs of hearing.’ This was the dictum honestly expressed by the ‘ HEADS of the profession.’ ”—(Wilde's Treat. Diseases of Ear, p. 18.)

Having directed attention to the apathy with which the profession has heretofore treated affections of the auditory apparatus, and urged, with all the force I was capable of, the necessity of increased zeal and attention to those affections, I next proceed to give the result of Mr. Toynbee's dissections.

Mr. Toynbee dissected the Ears of 750 persons. He published the result of the examination of 915 Ears. Of these, 303 were in a healthy state. Of the remaining 612, 184 belonged to persons who were known during life to have been deaf. 70 others showed such traces of disease as left little doubt of defective hearing during life; and the remaining were believed by Mr. Toynbee to be in a state of insipient deafness.

The external meatus was diseased in 80, or nearly 1 in 10½.

Of these, 58 consisted of collection of cerumen and epithelium ; 13 consisted of collection of pus and epithelium ; 9 consisted of contraction of the canal, with alterations in its lining membrane and osseous parieties.

The membrana tympani was diseased in 209, or nearly 1 in every 3.

Of these, 52 had the membrane white, thickened, or vascular ; 15 had the membrane concave externally or flat ; 21 had the membrane concave, and adhering to the promontory ; 4 had the membrane concave, with deposits of calcarious matter ; 51 had the membrane perforated, or altogether destroyed ; 66 had the membrane adherent to, or connected by bands with, the ossicula or promontory.

The cavitus tympani presented evidence of disease by morbid collections in 107, or 1 in 6.

Of these, 43 had collection of mucous, with lining membrane healthy ; 5 had collection of mucous, with membrane thickened ; 2 were filled with portions of cerumen and epithelium scales, the result of perforation or destruction of the membrana tympani ; 15 had a collection of pus, with membrana thickened ; 4 were filled with blood ; 10 with serum or lymph ; 20 with scrofulous matter ; 1 with oily matter ; 7 with calcareous matter.

The mucous membrane of the cavitas tympani was diseased in 310, or a little more than one-half of those examined.

In 66, the membrane was more vascular than natural ; 179, the membrane was thickened ; 22, the membrane was so thickened as to bury the whole of the stapes ; 8, the membrane was so thick as to fill the tympanum ; 5, the membrane was pulpy ; 20, thickened and ulcerated ; 2, it had black pigment secreted beneath ; 8, it had blood vessels under it ; and in 1, serum under it.

Bands of adhesion were found to exist in the cavity of the tympanum in 279, or 1 in nearly $3\frac{1}{2}$.

Of these, in 130, the bands passed between the stapes and the promontory; 8, the bands were connected with the incus, stapes, and promontory, 12, the bands joined the malleus with the surrounding parts; 13, they connected at the ossicles; in 9, they connected the ossicles with the promontory; 3, they united the tensor tympani muscle and the stapes; 4, they united the chorda tympani nerve with the adjacent parts.

The ossicles were diseased or displaced in 61, or 1 in 10.

Disease of the bony parietes occurred in 82 cases, or nearly 1 in $7\frac{1}{2}$.

The membrane of the fenestra rotunda was diseased in 5, the tensor tympani muscle atrophied in 7, and attached to the stapes in 1.

The Eustachian tube presented symptoms of disease in 21 cases, or 1 in 29. The upper part of this tube only was submitted to examination. In 10, it contained mucous; 8, its lining membrane was thickened, vascular, or congested; 3, it had bands connecting its parietes.

The internal Ear was diseased in 21, of which 4 had the membranous labyrinth thickened, 6, atrophied; 8, the fluids of the labyrinth were deficient; 1, the vestibule and cochlea contained bloody serum; 1, pus; 1, a band across the vestibule.

Mr. Toynbee makes the following remarks on those dissections:

“The fact of a thickened or otherwise deranged state of the mucous membrane lining the tympanic cavity, being one of the most common pathological conditions of the organ of hearing, is the broadest general results of the dissections; and as cases carefully examined, noted, and studied as they have arisen in practice, lead to the

same conclusion, I have little hesitation in stating disease of that membrane to be the most usual cause of deafness. What are the history and symptoms of the great majority of cases of deafness unattended by discharge? Cold has been caught, uneasiness has been felt, renewed attacks of cold have added to the severity of the symptoms, advice is at length sought, and examination shows the external meatus deprived of cerumen, and frequently deficient in natural sensibility, while towards the membrana tympani, its appearance is red and smooth, the membrana tympani is entire, its surface shines, but it is hazy, opaque, or as white as parchment, and, consequently, the handle of the malleus may be discerned with varying degrees of distinctness, or cease to be visible at all. Upon a further expiration with closed nostrils, the air, by means of the otoscope, can almost always be heard to enter the tympanum, not gradually, however, as when the organ is healthy, but with a puffing, bubbling, or cracking sound, as though impeded in its progress."

The following statistics which could be much enlarged, if necessary, will show the correctness of the assertion, that affections of the Ear are as curable as the affections of other organs, if treated with the same judgment and in time:

Out of 2,385 cases of disease of the Ear recorded in Mr. Wilde's book, 579 were simply cases of impaired hearing produced by impaction of the external auditory passage with cerumen; 114, of what, for a better name, were called nervous deafness; 25, tinnitus aurium, unaccompanied at the time by deafness or any apparent disease; 14, otalgia; 7 of deaf dumbness; 2 of accidental hemorrhage from the tympanal cavity; 7 of congenital malformation: 20 of collapsed membrana tympani, and 2 of tumor in auricle—making in all, after giving

the largest margin, but 770 cases of diseases of the Ear out of 2,385 cases not directly traceable to inflammation or its effects; or, in other words, 1,615 cases of inflammatory affections of the organs of hearing, which, if neglected in the first stage, or what is still worse, if left in the hands of quacks, or improperly treated, might terminate in the loss of hearing,

Mr. Wilde says :

"In the first portion of the table, out of 706 recorded cases, 85 were set down to 'nervous deafness,' which I am inclined to think was an exaggeration, as by a more carefully conducted examination, and with increased experience, I found but 18 cases out of 1,679 in the second period."

Diseases of the auricle and external meatus amounted to nearly one-half of the entire.

Affections of the membrana tympani, exclusive of collapse, number 219, or nearly one-third of the entire.

Diseases of the middle Ear amount to 101, or about one twenty-third of the whole.

"When I first commenced the study of aural diseases," says Wilde, "I believed that in most cases where I had no positive evidence of disease in the meatus or membrana tympani, the deafness and tinnitus were caused by some defect in the nerve of hearing, or what is termed 'nervous deafness.' As, however, my field of observation extended, and as my knowledge of the healthy and morbid appearances of the membrane improved, I gradually began to find that the instances of deafness with PERFECTLY HEALTHY tympanal membranes which fell under my observation were comparatively few, while I daily became familiarized with a variety of pathological appearances in these structures, which I was soon convinced were the result of different forms of inflammation of an acute or chronic nature,

arising from some idiopathic or specific cause. These appearances naturally led me to pay particular attention to those diseases in their early stages, the only period at which, in most of them, art can be of any avail." (p. 105.)

In the Ophthalmic branch of the Hospital to which Mr. Wilde is attached, there were registered 11,233 cases of disease of the Eye, of which 857 were diseases of the retina and optic nerve, and only 341 of these were instances of uncomplicated amaurosis, or about 1 to every 33 of the entire; whereas in the Ear diseases, as seen above, the proportion of nervous diseases, although the proportion is much exaggerated, was only 1 to 21.

Dr. Kramer, although he classes 1,028 out of 2,000 cases as nervous disease, yet it will strike most persons who carefully study his tables, that these nervous affections might, and probably did, originate in inflammation. Of the 2,000 cases, 442, or something less than one-fourth of the whole, were inflammation of the tympanal membrane—of these 45 were acute, and 397 chronic; 154, or nearly one-twelfth of the whole, were inflammation of the middle Ear, 30 of alterations in the Eustachian tube; 28 of stricture, and 2 of occlusion; 4 inflammation of the periosteum of the cavity—in all 198 cases of disease of the Middle Ear.

Mr. Harvey says:—"Nervous Deafness, so called, is too often regarded as a weakness or defect of the auditory nerves, whereas it is frequently dependent upon some latent disorder of the general health, not always complained of by the patient, but which will readily yield to medical treatment, as will with it the local defect of hearing," and he is certainly supported by the evidence furnished by the following statistics:

Dr. Tschärner of Berne published the result of 200 cases—115 men and 85 women. Of these, both Ears

were affected in 153 cases—the right in 22, the left in 20. The auricle was diseased in 10 : the external meatus and auditory canal, 163 : the membrana tympani, 122 : the cavitas tympani, 79 : the Eustachian tube, 74, and the labyrinth, 72, but the disease co-existed in several of these parts.

Of 2,500 cases treated in the London Royal Dispensary for Diseases of the Ear, about 1,000 proved to be curable, or 1 in $1\frac{1}{2}$, and Mr. Harvey, surgeon to the institution, remarks : “ These included many cases apparently of the most hopeless character and protracted duration. It must, however, be understood that the prospect of recovery will very much depend upon the right moment of time being selected for the treatment ; and it too often happens that, through the neglect of the patient and mistaken views, the disease is, in the first instance, either allowed to run its course unchecked, or is rendered incurable by mismanagement. Patients are too often induced to expect that a disease unattended with pain will disappear without any assistance from art. Many imagine that a discharge from the Ear, instead of being, as it often proves, a symptom of dangerous disease, is in fact salutary, and ought not to be checked ; others do not notice the gradual approach of imperfection in their hearing until it has become very obvious to their friends ; and in both cases the proper treatment is neglected, valuable time is lost, and at length organic changes are established which no surgical or medical art can reach or modify. It is much to be regretted that, in some instances, this neglect has been in some degree sanctioned by timid practitioners declining to interfere, and thus leaving the patient either to despair, or to throw himself into the arms of the numerous advertising quacks, or else inducing him to hope for a spontaneous recovery from a disease, which in fact, requires for its successful treatment the resources of

medicine and surgery in their more modern and advanced stage of cultivation." (Harvey on the Ear in Health and Disease, pp. 36, 37, 2d Ed., Lon. 1856)

In the foregoing pages I have shown the difficulties attending the cultivation of Aural Medicine, and urged on the profession the necessity of a general movement to overcome these difficulties. I have not let a single point in this paper rest entirely on my own reasoning, no matter how conclusive that reasoning seemed to be, but quoted authorities of the highest standing in the profession, and of universal renown, in support of every position I have taken. Indeed the danger is, that I may have fatigued by too many quotations. There is one more point to which I will take the liberty to allude. There may not be encouragement enough to physicians to devote sufficient time to the acquisition of the necessary knowledge for the successful cultivation of Aural Medicine. Saunders and Cooper commenced its practice with talents and zeal commensurate with its importance, but soon forsook it for more congenial or more profitable pursuits. It requires, in consequence of the obscurity in which physiologists and pathologists have left this organ and its affections, long and close application for its thorough understanding and successful practice. As Dr. Kramer remarks :—" It is of the utmost importance to every medical practitioner who wishes to make himself familiar with the manual part of Acoustic Medicine, and without the most accurate knowledge of the manual part, HE OUGHT NOT TO TREAT ANY DISEASES OF THE EAR, if he would avoid doing injury when he cannot render aid." Moreover, we have seen that affections of this organ are often insidious and painless in their approach, NO DEFECT TO PERSONAL APPEARANCE, hence are neglected by the sufferer in their easily curable stage. If the organ of hearing was as prominent as the eye or the teeth—if its integrity was as important to our personal appearance,

the multitude would be more solicitous for its preservation—it would claim and obtain their most serious consideration in its first and easily curable stage; and then would, like dental and ophthalmic surgery become, from the multitude seeking relief—**LUCRATIVE**—and being lucrative, it would merit and obtain from mankind—and, Doctors, according to Cuvier, belong to the genus homo—that attention which profitable pursuits always obtain, and many an unhappy victim would be rescued from a most pitiable condition.

If only a part of what has been said be true, that diseases of the Ear are numerous, and in their incipient state as much under the control of the physician's skill as any other class of maladies—that when of long standing they are seldom, or with difficulty, curable—that in no branch of medical science are there required greater tact, longer and closer study, quicker discernment, than in the skillful management of diseases of the Ear, and yet that it is an indisputable fact—it is an admitted fact, that medical practitioners in general are unacquainted, or at most but partially acquainted with them. A gentleman in this city has told me that he suffered for some time with a rushing, rolling noise, as he termed it, in his Ears, with dulness of hearing in one Ear, for which he consulted several of our **HEAD DOCTORS**, by whom he was, in turn, blistered, and syringed, and stuffed with oil and **BLACK COTTON** without any benefit. He was at length induced to consult a dentist, who, recollecting the fable of the town in danger of being besieged, told him his Ear affection was the result of a hole in one of his teeth, by which operation he lost what he considered a good tooth and increased his deafness. Now this gentleman's case was very simple as the sequel shows, for about a year from this time his deafness left him, with a crack, and a discharge of a piece of dried skin. The crack was nothing more than the oscillations of sound reaching the

drum of the Ear suddenly, which was before prevented from doing so by this dried wax, or membrane, and which any person acquainted with the improvements in Aural Medicine could have removed in a few seconds I say if only a part of all this be true, it is sufficient apology for bringing before this society the subject of Aural Medicine and Surgery, with a hope that these defects may be removed from this community, and that we may, in imitation of our brethren in other parts, open public institutions for the proper cultivation and treatment of Aural affections. In a future essay, I shall trace the history of the treatment of diseases of the Ear from the earliest period in the correct history of our art, marking our advance and to whom we are indebted for such advance: and a third paper shall be devoted to the anatomy, physiology, pathology and therapeutics of diseases of the Ear, as at present understood and practiced by our best Aural Pathologists.

I have only to regret that I cannot bring to the subject the abilities and experience which its importance demands: but as the snow-ball increases in bulk by every revolution as the little innocent urchin rolls it along in his path, so in this instance a feeble effort when put forth with good intentions in so meritorious a cause, is better than no effort at all, and may be kept in motion by the generous effort of some more powerful advocate, until at last Brooklyn can boast of an institution for the relief of so numerous a class of our citizens at present entirely neglected.

Permit me to say, in conclusion, that I shall be amply compensated for the labor devoted to the production of this appeal, if only through it I be the means of rousing my brethren of the profession to a sense of their responsibilities on this important branch of our glorious science, and if I be the humble instrument of calling the attention of some more competent to the subject.

